

Amendment to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application:

1-13. (Canceled)

14. (Currently Amended) Use of a neural implant that enhances proliferation of neural tissue and minimizes scar formation comprising:

(a) obtaining a neural implantable device;

(b) coating the implantable device with a composite nanomaterial, said nanomaterial comprising carbon nanofiber material with nanofibers about 2 to 200 nm in width and a polymer matrix; and

(c) securing the implantable device in the neural tissue where proliferation of neuronal tissue is desired.

15. (Currently Amended) Use of a neural implant that enhances proliferation of neural tissue and minimizes scar formation comprising:

(a) obtaining a neural implantable device comprising a composite nanomaterial, said nanomaterial comprising carbon nanofiber material with nanofibers about 2 to 200 nm in width and a polymer matrix; and

(b) securing the implantable device in the neural tissue where proliferation of neuronal tissue is desired.

Claims 16-21 (Canceled).

22. (Currently Amended) The use in accordance with claim 15 wherein said nanomaterial comprises a carbon nanofiber material with nanofibers about 2 to 200 nm in width is a polyurethane-carbon nanofiber composite.

23. (Previously presented) The use in accordance with claim 22 wherein said carbon nanofibers comprise carbon nanotubes.

24. (Canceled) .

25. (Previously presented) The use in accordance with claim 23 wherein carbon nanotubes are functionalized with 4-hydroxynonenal.

26. (Previously presented) The use in accordance with claim 23 wherein the carbon nanotubes are aligned with one another.

27. (Currently Amended) ~~A method of minimizing glial scar tissue formation upon implantation of a neural prosthesis, said method comprising the step of~~ Use of a neural implant that minimizes scar formation comprising:

(a) obtaining a neural implantable device, wherein said neural implantable device comprises a nanocomposite component, said nanocomposite comprising a polymer material and a nanomaterial wherein said nanomaterial has a dimension ranging from 5 nm to less than 500 nm;

(b) implanting a neural prosthesis ~~said neural implantable device in the neural tissue of a patient where proliferation of neuronal tissue is desired, said prosthesis comprising a nanocomposite component, wherein said nanocomposite is comprised of a polymer material and a nanomaterial wherein said nanomaterial has a dimension ranging from 5 nm to less than 500 nm.~~

28. (Currently Amended) ~~The method of claim~~ The use in accordance with claim 27, wherein said nanomaterial comprises a plurality of nanoparticles disposed on said nanocomposite.

29. (Currently Amended) ~~The method of claim~~ The use in accordance with claim 27, wherein said polymer is selected from the group consisting of polyurethane, polymethacrylate, polyester, polyvinyl and any copolymers thereof.

30. (Currently Amended) ~~The A method of minimizing glial scar tissue formation upon implantation of a neural prostheses, said method comprising the step of~~
~~implanting a neural prostheses in the neural tissue of a patient, said prostheses~~
~~comprising a~~ The use in accordance with claim 27 wherein the nanomaterial component
comprised of a polyurethane (PU)-carbon nanofiber (CN) composite.

31. (Currently Amended) ~~The method of claim~~ The use in accordance with claim 30,
wherein the carbon nanofibers comprises 2% to 100% of the nanocomposite.

32. (Currently Amended) ~~The method of claim~~ The use in accordance with claim 30
wherein, the carbon nanofibers have a size in the range of about 10 to about 100 nm in width and
length.

33. (Currently Amended) ~~The method of claim~~ The use in accordance with claim 32
wherein the nanofibers are multi-walled nanotubes.

34. (Currently Amended) ~~The method of claim~~ The use in accordance with claim 30
wherein the polyurethane (PU)-carbon nanofiber (CN) composites have a size in the range of
about 50 to 100 nm and the composite comprises about 80:20 by weight percent carbon
nanofiber to polyurethane.

35. (Currently Amended) ~~The method of claim~~ The use in accordance with claim 30
wherein the polyurethane (PU)-carbon nanofiber (CN) composites have a size in the range of
about 60 to 100 nm and the composite comprises about 90:10 by weight percent carbon
nanofiber to polyurethane.